

Claims

1. A method for processing a nucleic acid sample contained in a liquid, said method comprising

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(a) introducing said liquid into a chamber of a cartridge which contains a chip shaped carrier, an active surface of which carries an array of oligonucleotides, said chamber having a narrow interior and including a channel
10 comprised between two inner surfaces of said chamber,

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(b) positioning said cartridge in a cartridge holder, said positioning being effected before or after introduction of said liquid into said chamber, and

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(c) oscillating said cartridge holder and thereby said cartridge about an axis of rotation which is substantially perpendicular to a vertical plane, thereby moving said cartridge back and forth between a first angular position and a second angular position which lie on opposite sides of an intermediate angular position at which said active surface of said chip shaped carrier is substantially at a lowest part of its motion path caused by said oscillating of said cartridge, in order to cause relative motion of the
25 liquid contained in said channel with respect to said active surface of said chip shaped carrier.

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2. A method according to claim 1, wherein said channel is a curved channel.

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3. A method according to claim 1, wherein the cartridge is held by the cartridge holder in such a way that the active surface of the chip shaped carrier lies in a substantially vertical plane.

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4. A method according to claim 1, wherein said active surface of the chip shaped carrier is adjacent to a central portion of said channel.

5. A system for processing a nucleic acid sample contained in a liquid, said system comprising

(a) a cartridge which comprises

5 (a.1) a chip shaped carrier having an active surface which carries an array of oligonucleotides, said active surface facing an inner surface of a part of said cartridge, and

10 (a.2) a chamber having a narrow interior and including a channel, a portion of said channel lying between said active surface and said inner surface,

(b) a cartridge holder which is adapted to hold said cartridge, and

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(c) means for oscillating said cartridge holder and thereby said cartridge about an axis of rotation which is substantially perpendicular to a vertical plane and thereby moving said cartridge back and forth between a first angular position and a second angular position which lie on opposite sides of an intermediate angular position at which said active surface of said chip shaped carrier is substantially at the lowest part of its motion path caused by said oscillating of the cartridge in order to cause relative motion of the liquid contained in said channel with respect to said active surface of said chip shaped carrier.

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6. A system according to claim 5, wherein said channel is a curved channel.

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7. A system according to claim 5, wherein said active surface of the chip shaped carrier is adjacent to a central portion of said channel.

35 8. A system according to claim 5, wherein the cartridge holder is designed to hold the cartridge in such a way that said active surface of said chip shaped carrier lies in a substantially vertical plane.

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9. A cartridge for processing a nucleic acid sample contained in a liquid, said cartridge comprising

(a) a chip shaped carrier having an active surface which carries an array of oligonucleotides, said active surface facing an inner surface of a part of said cartridge, and

(b) a chamber having a narrow interior and including a channel, a portion of said channel lying between said active surface and said inner surface.

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10. A cartridge according to claim 9, wherein said channel is a curved channel.

11. A cartridge according to claim 9, wherein said active surface of chip shaped carrier is adjacent to a central portion of said channel.

12. A cartridge according to claim 9, wherein said cartridge is a disposable component and is made of a plastic material.

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